

Remarks

Applicant would like to thank the Examiner for the telephone interview on October 20, 2005. During the interview, the examiner suggested amending claims 29, 30, 33, 34, 37, 38, 41, 42, 49, 52 to re-cite only the device and the method steps of operation in functional language form to overcome the rejection. As example, the claim 29 was discussed. Applicant has amended claims 29, 30, 33, 34, 37, 38, 41, 42, 49, 52 accordingly.

During the interview, claim 1, specifically in light of Franzen (US 5,468,958) reference, was discussed. Claim 1 is amended accordingly.

Accordingly, these claims are submitted to be properly allowable in this application.

The explanation the applicant presented at the interview is as follows:

In Franzen (US 5,468,958), RF higher multipole field is generated in the ion trap. It is different from AC voltage which generates RF dipole field. There is neither teaching nor suggestion of generating DC higher multipole field, such as DC octopole. In contrast, in applicant's application, DC higher multipole field ((like DC hexapole, octopole field; not RF higher multipole field) is generated in the ion trap, which is different from Franzen (US 5,468,958). The article (R.Alheit et al. High Order Non-linear Resonances In a Paul Trap. *International Journal of Mass Spectrometry and Ion Processes*, 154, (1996) 155-169), as cited in the applicant's specification, had theoretically and experimentally studied the effects of applying RF higher multipole field in ion trap. The results have shown that massive non-linear resonances are generated when RF higher multipole field are used in ion traps. Those massive non-linear resonances will result in many "ghost" mass-ion peaks if the ion trap is used to analyze ion-mass. In that sense, RF higher multipole field is practically undesirable. In contrast, in applicant's application, because of using DC higher multipole field, those disadvantages will be eliminated. Furthermore, since the intensity of the DC higher multipole field is electrically variable, DC higher multipole field is controllable, which is another advantage.

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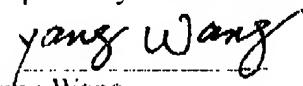
In Franzen (US 5,468,958), the surface shape of the ion trap is exact hyperbolic in the trap's cross-section, even when the electrodes are cut into segments. In applicant's application, the surface shape of the ion trap can be non-hyperbolic, such as consisting of circle and straight lines in the trap's cross-section.

Above amendments to claims are only for the purpose of expediting the prosecution of this application and are not to be construed as an abandonment of any of the novel concepts disclosed therein.

Enclosed is a \$60 check for the Petition for Extension of Time fee.

Respectfully submitted,

Date Oct. 21, 2005

  
Yang Wang

7 Black Bear Lane  
Westford, MA 01886